

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/045894 A3

(51) International Patent Classification⁷: **B21D 39/00, B23K 31/02, 35/12, B32B 31/00**

(21) International Application Number:
PCT/US2004/035452

(22) International Filing Date: 25 October 2004 (25.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/514,237 24 October 2003 (24.10.2003) US
10/803,502 17 March 2004 (17.03.2004) US

(71) Applicant (for all designated States except US): **STATE OF OREGON ACTING BY AND THROUGH THE STATE BOARD OF HIGHER EDUCATION ON BEHALF OF OREGON STATE UNIVERSITY [US/US];** Office of Technology Transfer, 312 Kerr Administration Building, Corvallis, OR 97331-2140 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PAUL, Brian, K.** [US/US]; 2005 N.W. Lance Way, Corvallis, OR 97330 (US). **PLUESS, Christoph [CWCH];** Weissenbuehlweg 40, CH-3004 Bern (CH). **SHARMA, Nitin [IN/US];** 242 Acalanes Drive, #1, Sunnyvale, CA 94086 (US). **DOOLEN, Toni, L. [US/US];** 4036 NW Live Oak Place, Corvallis, OR 97330 (US).

(74) Agent: **SLATER, Stacey, C ; Klarquist Sparkman, LLP,** One World Trade Center, Suite 1600, 121 SW Salmon Street, Portland, OR 97204 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17 (iv))

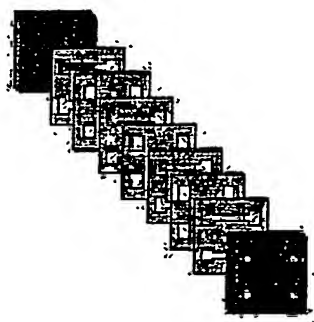
Published:

— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
27 April 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **HIGH VOLUME MICROLAMINATION PRODUCTION OF DEVICES**



(57) Abstract: Embodiments of a differential thermal expansion bonding device are described for the high volume bonding of laminae together to form a MECS device. One embodiment of the device comprises a frame, engager made of a solid, liquid or gas, preload with springs and platens. Other embodiments of a method for bonding laminae together to form a MECS device using surface mount technology (SMT) techniques are described, with one embodiment being directed towards conveyorized bonding. The method including providing laminae to be bonded that do not include a solder mask, microetching at least a portion of at least one lamina, applying solder paste to a microetched portion, and bonding the laminae together using the solder paste. A method for continuously bonding laminae also is described, such as by using a conveyorized furnace for applying heat to a workpiece functionally associated with the bonding device. The method can include forced convective heating, cooling or both, using inert gas flush. A method and fixture for registering laminae compatible with the differential thermal expansion bonding device by using integral compliant features is also described.

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